

**REMARKS**

The specification has been amended to provide appropriate headings and to cancel the last paragraph on page 1 which improperly referred to the claims. The specification has also been amended to correct the errors noted by the Examiner on pages 9 and 10. However the spelling of "on board" is believed to be proper since the dictionary defines it as being two separate words. In conjunction with the proposed corrects to the drawings and the addition of a sentence at the end of the first paragraph on page 9 the auxiliary engine 2' and the various components are referred to with each number primed. Thus the numeral 110 in figure 2 has been changed to 110'. Likewise the corresponding sensors and transducers in the main engine were incorrectly identified by the reference numeral 10 which relates to the sensors or transducers in the carriages. Thus the reference numeral 10 in the main engine has been changed to 110.

In the last Office Action claims 1-11 inclusive were objected to and were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1-11 inclusive have been cancelled without prejudice in order to advance the prosecution of the present application and new claims 12-22 inclusive have been substituted therefore. These claims correspond to original claims 1-11 insofar as the limitations are concerned and differ only in the correction of the numerous terminology changes required by the Examiner.

In the last Office Action claims 1, 3, 4, and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Morihara in view of Fujioka et al. The remaining claims have also been rejected in view of the same combination of references taken in combination with other references. As mentioned above claims 1-11 inclusive have been cancelled without prejudice in order to advance the prosecution of the present application and new claims 12-22 have been

substituted therefore. Reconsideration and allowance of these claims is respectfully requested in view of the following remarks.

Claim 1 is directed to a communication and control system in a railway train comprising first and second bi-directional transmission lines. Morihara shows in figure 1 a communication and control system for a railway train comprising two lines indicated 5 and 14. Line 5 is defined as a data transmission (column 3, lines 20-21). Further passages in the description indicate that line 5 is used to transmit signals from local transmission terminals 4 to a transmission center 3 (see for instance column 3, lines 28-34). The description set forth in Morihara never mentions that line 5 could be used for transmission in the opposite direction, that is from the transmission center 3 to the transmission terminals 4. While there is a possibility that line 5 is a bi-directional line in view of the fact that figure 1 shows transmission terminals 4 connected to line 5 through double-arrowed connections, it is absolutely clear the line 14 of Morihara is not a bi-directional line. In the specification of Morihara line 14 is defined as a command line for delivering brake command signals from a brake command unit 8 to brake operating units 9 installed in the individual cars and the transmission center (column 3, lines 43-50). Furthermore in figure 1 the “arrows” which emanate from line 14 clearly confirm that line 14 is not a bi-directional line.

Claim 12 of the present application further recites a plurality of slave control units connected to both of the transmission lines. In rejecting the claim the Examiner has taken the position that the transmission terminals 4 correspond to the claimed slave control units. However the transmission terminals 4 of Morihara are not connected to both transmission lines 5 and 14 but only to line 5. According to claim 12 of the present application the slave control units

are connected to valve units associated with pneumatic brake actuators. This feature was acknowledged by the Examiner as not being anticipated by Morihara. Furthermore claim 12 of the present application recites that the main control units and the slave control units are arranged to communicate via the transmission lines according to a predetermined serial protocol. According to this feature the communication takes place in accordance with a serial protocol on both transmission lines. In connection with this it is noted that the transmission line of Morihara is actually a serial transmission line (column 3, lines 20-21). However line 14 of Morihara is never defined to be a serial line.

Claim 12 also specifically sets forth that the main control unit is arranged to transmit to the slave control units brake control signals. In Morihara no transmission of brake control signals takes place between the transmission center 3 and the brake control unit 8 and the transmission terminals 4.

Finally, according to claim 12 the brake control signals are of the serial type. As pointed out above, in Morihara the brake control signals are transmitted from the brake control unit 8 and to the brake operating unit 9 through line 14 which is not a serial transmission line. Thus the brake control signals are not of the serial type.

Fujioka was cited as disclosing the use of solenoid valve units in association with brake actuators. However even if the teachings of Fujioka were to be combined with Morihara the combination would still not meet the specific limitations of claim 12 as outlined above. However what is actually relevant to the present invention is that the slave control units are connected to the solenoid valve units associated with the brake actuators rather than the

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association of solenoid valves to brake actuators as disclosed in Fujioka. Neither Morihara or Fujioka disclose the slave control units being connected to the solenoid valve units associated with the brake actuators.

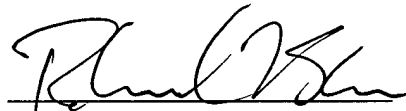
In view of the foregoing distinctions it is submitted that claim 12 is clearly not obvious in view of the teachings of Morihara taken either alone or in combination with Fujioks. Therefore it is respectfully requested that claim 12 as well as claims 13-22 inclusive which are dependent therefrom be allowed and the application passed to issue forthwith.

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If for any reason the Examiner is unable to allow the application on the next Office Action and feels that an interview would be helpful to resolve any remaining issue, the Examiner is respectfully requested to contact the undersigned attorney for the purpose of arranging such an interview.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert V. Sloan", is written over a horizontal line.

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**APPENDIX**  
**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE SPECIFICATION:**

**The specification is changed as follows:**

Page 1, delete the heading “DESCRIPTION” and insert the heading

**BACKGROUND OF THE INVENTION**

Page 2, after the second full paragraph insert heading

**SUMMARY OF THE INVENTION**

delete the last paragraph at the bottom of the page in its entirety.

Page 3, before the first paragraph insert the heading

**BRIEF DESCRIPTION OF THE DRAWINGS**

after the fourth paragraph insert the heading

**DETAILED DESCRIPTION OF THE INVENTION**

Page 9, amend the first paragraph as follows:

--To the control unit 6' of the or each auxiliary engine 2' there are conveniently connected sensors or transducers 110' to provide information or state signals intended to be transmitted to the main control unit 6 of the lead engine 2 via one or the other of the transmission lines 4 and 5 for feedback verification by the main control unit 6 of the synchronisations of the various operations. Sensors or transducers 110 could also be provided in the lead engine 2.--.

amend the third paragraph as follows:

--The main control unit 6 is moreover advantageously prearranged to detect a possible condition in which the transmission lines 4 and 5 are interrupted each between different pairs of

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slave control units, such as the condition illustrated by way of example in Figure 3, in which the two interruptions are indicated I1 and I2. Upon detection of such a condition the main control unit 6 sends the ~~said~~ transducer command signals to at least two slave control units between which there is an interruption of one of the transmission lines 4, 5.

Page 10, amend the third full paragraph as follows:

--In operation in an emergency condition of the type shown in Figure 3, the provisional line 6'-16 is nevertheless usable for the propagation of the electricity supply for the various slave control units 9 and 6'--

**IN THE CLAIMS:**

**Claims 1-11 are canceled.**

**Claims 12-22 are added as new claims.**

**IN THE DRAWINGS:**

**A copy of figure 2 is submitted herewith showing proposed changes in red for approval.**

**IN THE ABSTRACT OF DISCLOSURE:**

**The present Abstract has been replaced with the substitute Abstract of the Disclosure found on the attached unnumbered sheet.**